English translation of the amended sheets of International Preliminary Examination Report

CLAIMS

1. Composition characterized in that it comprises a polyanion linked to a molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein chosen from a CD4 peptide or a derivative of this peptide, or else a monoclonal antibody which binds to the gp120 viral protein and which is capable of activating said gp120 protein in a manner equivalent to the CD4 peptide.

2. Composition according to Claim 1, in which the polyanion is chosen from the group consisting of heparin, heparan sulphate, and a polyanion equivalent to heparin or to heparan sulphate.

3. Composition according to Claim 2, in which the heparin, the heparan sulphate or the polyanion equivalent to heparin or to heparan sulphate has a degree of polymerization dp of 10 to 24.

4. Composition characterized in that it comprises a mixture:

- of a polyanion chosen from heparin, heparan sulphate or a polyanion equivalent to heparin or to heparan sulphate, said polyanion having a degree of polymerization dp of 10 to 24, and
- of a molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein chosen from a CD4 peptide or a derivative of this peptide, or else a monoclonal antibody which binds to the gp120 viral protein and which is capable of activating said gp120 protein in a manner equivalent to the CD4 peptide.

English translation of the amended sheets of International Preliminary Examination Report

5. Composition according to Claim 2 or 4, in which the heparin, the heparan sulphate or the polyanion equivalent to heparin or to heparan sulphate has a degree of polymerization dp of 12 to 20.

6. Composition according to Claim 2 or 4, in which the heparin, the heparan sulphate or the polyanion equivalent to heparin or to heparan sulphate has a degree of polymerization dp of 15 to 17.

7. Composition according to Claim 1 or 4, in which the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein is the CD4 peptide of sequence (I) below:

Cys or *TPA* - P^1 - Cys - P^2 - Cys - P^3 - Cys - Ala or Gln - Gly or (D)Asp or Ser - Ser or His or Asn - Xaa^J - Cys - Thr or Ala - Cys - Xaa^k - NH_2

in which *TPA* represents thiopropionic acid, Xaa^J represents β-naphthylalanine, phenylalanine or biphenylalanine, Xaa^k represents Gly, Val or Ileu, P^1 represents 3 to 6 amino acids, P^2 represents 2 to 4 amino acids and P^3 represents 6 to 10 amino acids, the amino acids in P^1, P^2 and P^3 being natural or unnatural, identical or different, and P^1, P^2 and P^3 possibly having a common sequence, said peptide having a β-hairpin conformation in which the β-turn is made up of the amino acid residues Ala or Gln - Gly or DAsp or Ser-Ser or His or Asn- Xaa^J of its sequence (A).

8. Composition according to Claim 7, in which the CD4 peptide is chosen from the sequences ID No. 1 to ID No. 18 of the sequence listing attached in the appendix.

English translation of the amended sheets of International Preliminary Examination Report

9. Composition according to Claim 4, in which the polyanion and the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein are mixed in said composition in proportions of 1 to 10 mol of polyanion per 0.5 to 1.5 mol of molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein.

10. Composition according to Claim 4, in which the polyanion and the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein are mixed in said composition in proportions of 5 mol of polyanion per mole of molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein.

11. Composition according to Claim 1, in which the polyanion and the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein are linked to one another at one of the ends of the polyanion.

12. Composition according to Claim 1, in which the polyanion and the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein are linked to one another by means of a spacer arm of the polyethylene glycol type.

13. Method for producing a composition according to Claim 4, comprising the following steps:

- preparing the polyanion,
- preparing the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein,

English translation of the amended sheets of International Preliminary Examination Report

- mixing the polyanion and the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein prepared so as to obtain said composition.

14. Method for producing a composition according to Claim 1, comprising the following steps:

- preparing the polaynion,
- preparing the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein,
- linking the polyanion and the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein prepared so as to obtain said composition.

15. Method of production according to Claim 13 or 14, in which the polyanion is prepared by partial depolymerization of heparin or of heparan sulphate by means of an enzymatic or chemical method.

16. Method of production according to Claim 13 or 14, in which, since the molecule capable of inducing the exposure of the CD4i epitope of the gp120 viral protein is a peptide, it is prepared by solid-phase chemical synthesis or by genetic recombination.

17. Use of a composition according to either of Claims 1 and 4, for preparing a medicinal product.

18. Use of a composition according to either of Claims 1 and 4, for preparing a medicinal product intended for the treatment of AIDS.